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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/939,679

08/28/2001

Jun Sato

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EXAMINER

HEINRICHS, CHRISTOPHER P

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/939,679

Applicant(s)

SATO 

Examiner

Christopher P. Heinrichs

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/01/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/28/2001</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5, and 9 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by U.S. Patent #6,246,684 B1 to Chapman et al.

3. With regard to claim 1, Chapman discloses a communication apparatus which is connected to a communication network and, via said communication network, communicates (intercepted, released) packets including sequence numbers (ID numbers) and data to be transmitted (see abstract), said packet transfer communication apparatus (fig 1 item 300) comprising reception means (fig 1 item 309) for receiving packets from said communication network (col 8 lines 19-20), extraction means (reordering queue buffer 310) for extracting (reading) the sequence numbers and the data to be transmitted (sequence numbers and source address information) from the packets received by said reception means (col 8 lines 35-39), in such a manner that the sequence numbers are consecutive or discontinuous (see fig 3, ID numbers read

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000001, 002346, 239811, which illustrates a numerical discontinuity), storage means (memory, fig 1 item 350) for storing the sequence number of the packet (in history table) until the packet whose sequence number lies between said discontinuous sequence numbers (IP data packets that are late, col 7 lines 16-17) have been received (col 7 lines 20-21), or during a specific period of time (col 10 lines 26-27), and rearrangement means (re-ordering queue, fig 1 item 310) for rearranging the received data including the data in the newly received packet and the data in the previously received packets (col 8 lines 44-46, and fig 2 step 914) on the basis of the sequence number (information in history table, fig 2 step 909) of the new packet (incoming packet, fig 2 step 900) extracted by said extraction means (above) and the sequence numbers stored in said storage means (above).

4. Claim 5 is a method claim corresponding to apparatus claim 1 and, therefore, is rejected under the same reasons set forth in the rejection of claim 1.

5. Claim 9 is a storage medium corresponding to method claim 5 and, therefore, is rejected under the same reasons set forth in the rejection of claim 5 and further because Chapman discloses a processor/controller (fig 1 item 340) where the program instructions are stored (col 3 lines 17-20).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 2-4, 6-8, and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent # 6,246,684 to Chapman et al. in view of U.S. Patent #5,822,524 to Chen et al.

4. With regard to claim 2, Chapman discloses all aspects of the apparatus of claim 1 but fails to disclose that the storage means stores the missing sequence number. However, Chen discloses a communication apparatus (fig 1 item 20) which is connected to a communication network (fig 1 items 5 and 6) with a storage medium (fig 2 item 38) and stores the missing sequence numbers (list of lost packets (col 7 lines 33-37)). It

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would have been obvious to one ordinarily skilled in the art at the time of the invention to include the storing of missing sequence numbers disclosed by Chen with the storage medium disclosed by Chapman to arrive at the invention of claim 2. The motivation to do so would have been that by storing the missing sequence numbers and deleting their entries upon receipt of discontinuous packets as disclosed by Chen, a system may maintain a smaller list than the history table disclosed by Chapman and conserve memory.

5. With regard to claim 3, Chapman discloses all aspects of the invention of claim 1 and further discloses that said rearrangement means includes means for comparing (fig 1 item 340, comparing noted in col 10 lines 1-2) the sequence number extracted by said extraction means (from new IP data packet, col 9 line 64) with the sequence numbers stored in said storage means (history table in memory) and thereby judging whether the order in which the packets were received is correct or not (determine if misordering exists, col 10 line 3), and means for, when said reception means has received a new packet within a specific period of time (col 8 lines 61-64), inserting new data (incoming packet, fig 2 step 900) having a sequence number into a suitable position so that the new data may be arranged in the stream of the received data in the order of sequence numbers (col 8 lines 44-46), but fails to disclose the other elements of claim 3.

However, Chen discloses means for comparing (client agent, col 7 lines 24-32), and if the result of the comparison showed that the order in which the packets were received is incorrect forming a list of the sequence numbers of the packets likely to be received in

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future (lost packets col 7 lines 33-37). It would have been obvious to one ordinarily skilled in the art at the time of the invention to include the list of the incorrectly ordered received packets disclosed by Chen with the apparatus disclosed by Chapman to arrive at the invention of claim 3. The motivation to do so would have been to conserve memory as set forth in the motivation for the rejection of claim 2.

6. With regard to claim 4, Chapman and Chen discloses the invention of claim 3 and further discloses that the apparatus comprises means for deleting the corresponding sequence number from said list after said specific period of time has elapsed (col 7 lines 43-45).

7. Claims 6-8 are method claims corresponding to apparatus claims 2-4, respectively, and, therefore, are rejected under the same reasons set forth in the rejection of claims 2-4.

8. Claims 10-11 are storage medium claims corresponding to method claims 6-7, respectively, and, therefore, are rejected under the same reasons set forth in the rejection of claims 6-7 and further because Chapman discloses a processor/controller (fig 1 item 340) where the program instructions are stored (col 3 lines 17-20).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Fujisaki et al. (U.S. Patent # 6,466,574 B1), Quality of Service Improvement of Internet Real-Time Media Transmission By Transmitting Redundant Voice/Media Frames
- b. Brown et al. (U.S. Patent #6,587,464 B1), Method and System for Partial Reporting of Missing Information Frames in a Telecommunication System
- c. Garcia et al. (U.S. Patent #6,493,343 B1), System and Method for Implementing Multi-Pathing Data Transfers in a System Area Network
- d. Breslow et al. (U.S. Patent #6,493,342 B1), Method of Data Transmission in a Data Communication Network
- e. Gibson et al. (U.S. Patent #6,445,717 B1), System for Retrieving Lost Information in a Data Stream
- f. Buchholz et al. (U.S. Patent #5,337,313 A), Method and Apparatus for Preserving Packet Sequencing in a Packet Transmission System

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Heinrichs whose telephone number is 571-272-8397. The examiner can normally be reached on Monday through Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


C. Heinrichs
A.U. 2663


RICKY NGO
PRIMARY EXAMINER 4/18/05